

SAFETY DATA SHEET

KMC DCBP-50



Version
1.2

Revision Date:
02/03/2017

Print Date:
02/06/2017

SECTION 1. IDENTIFICATION

Product name : KMC DCBP-50

Manufacturer or supplier's details

Company name of supplier : NanJing KMC Chemical Co.,Ltd

Emergency telephone : +86-25-57590439

E-mail address of person responsible for the SDS : admin@kmcchem.com

Recommended use of the chemical and restrictions on use

Recommended use : polymerization initiators

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Organic peroxides : Type D
Skin sensitization : Category 1
Reproductive toxicity : Category 1B

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
P234 Keep only in original container.

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P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:

P405 **Store locked up.**
P410 **Protect from sunlight.**
P411 + P235 **Store at temperatures not exceeding 30 °C/ 86 °F. Keep cool.**
P420 **Store away from other materials.**

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Organic Peroxide paste

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Bis-(2,4-dichlorobenzoyl) peroxide	133-14-2	>= 45 - < 50

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Call a physician immediately.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathed in, move person into fresh air.

In case of skin contact : In case of contact, immediately flush skin with plenty of water

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- for at least 15 minutes while removing contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If on skin, rinse well with water.
If on clothes, remove clothes.
If symptoms persist, call a physician.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Call a physician immediately.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
May damage fertility or the unborn child.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : Treat symptomatically and supportively.
-

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.
- The product burns violently.
Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
The product will float on water and can be reignited on surface water.
Cool closed containers exposed to fire with water spray.
- Specific extinguishing methods : Do not use a solid water stream as it may scatter and spread fire.
Remove undamaged containers from fire area if it is safe to do so.
Use water spray to cool unopened containers.

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- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations. Never return spills in original containers for re-use. Treat recovered material as described in the section "Disposal considerations".
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contact with incompatible substances can cause decomposition at or below SADT. Clear spills immediately. Suppress (knock down) gases/vapors/mists with a water spray jet. To clean the floor and all objects contaminated by this material, use plenty of water. Soak up with inert absorbent material. Isolate waste and do not reuse. Non-sparking tools should be used. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
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SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep
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away from combustible material.

Advice on safe handling : Do not swallow.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Take precautionary measures against static discharges.
Never return any product to the container from which it was originally removed.
Provide sufficient air exchange and/or exhaust in work rooms.
Avoid confinement.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Smoking, eating and drinking should be prohibited in the application area.
Wash thoroughly after handling.
For personal protection see section 8.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Protect from contamination.

Conditions for safe storage : Avoid impurities (e.g. rust, dust, ash), risk of decomposition.
Electrical installations / working materials must comply with the technological safety standards.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in original container.
Keep containers tightly closed in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

Materials to avoid : Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Recommended storage temperature : 5 - 30 °C

41 - 86 °F

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Bis-(2,4-dichlorobenzoyl) peroxide	133-14-2

Engineering measures : Minimize workplace exposure concentrations.

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Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Filter type : Filter type P
- Hand protection
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.
For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove Wash hands before breaks and at the end of workday.
- Eye protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
- Hygiene measures : Keep away from food and drink.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Color : white
- Odor : mild
- Odor Threshold : No data available
- pH : No data available
- Melting point/range : No data available
- Boiling point/boiling range : Decomposition: Decomposes below the boiling point.
- Flash point : No data available
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable

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Self-ignition	:	
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	< 0.00001 hPa (25 °C)
Relative vapor density	:	No data available
Relative density	:	1.212 (20 °C)
Density	:	1.2 g/cm ³ (20 °C)
Solubility(ies) Water solubility	:	< 0.001 g/l (20 °C) insoluble
Partition coefficient: n- octanol/water	:	log Pow: 6 (20 °C)
Self-Accelerating decomposi- tion temperature (SADT)	:	60 °C Method: UN-Test H.4 SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.
Viscosity Viscosity, dynamic	:	4,000,000 mPa.s (20 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Organic peroxide

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	Stable under recommended storage conditions.
Conditions to avoid	:	Protect from contamination. Contact with incompatible substances can cause decomposition at or below SADT. Heat, flames and sparks. Avoid confinement.
Incompatible materials	:	Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents
Hazardous decomposition products	:	Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Product:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Mild skin irritation

Remarks: May cause skin irritation and/or dermatitis.

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 437

Remarks: Product dust may be irritating to eyes, skin and respiratory system.

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 437

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Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Method: OECD Test Guideline 429

Result: Causes sensitization.

Remarks: Causes sensitization.

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Method: OECD Test Guideline 429

Result: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro : Method: OECD Test Guideline 476
Result: negative

: Method: OECD Test Guideline 487
Result: negative

Genotoxicity in vivo : Remarks: No data available

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Genotoxicity in vitro : Method: OECD Test Guideline 476
Result: negative

: Method: OECD Test Guideline 487
Result: negative

Genotoxicity in vivo : Remarks: No data available

Carcinogenicity

Not classified based on available information.

Product:

Remarks: This information is not available.

Reproductive toxicity

May damage fertility or the unborn child.

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Product:

Effects on fertility : Species: Rat, male and female
Dose: 1000 mg/kg bw/d
Symptoms: male reproductive effects
Target Organs: male reproductive organs

Species: Rat, male and female
Dose: 300 mg/kg bw/d
Symptoms: male reproductive effects
Target Organs: male reproductive organs

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Effects on fertility : Species: Rat, male and female
Dose: 1000 mg/kg bw/d
Symptoms: male reproductive effects
Target Organs: male reproductive organs

Species: Rat, male and female
Dose: 300 mg/kg bw/d
Symptoms: male reproductive effects
Target Organs: male reproductive organs

Species: Rat
Sex: male and female
Dose: 1000
Application Route: Oral

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT-single exposure

Not classified based on available information.

Product:

Remarks: No data available

STOT-repeated exposure

Not classified based on available information.

Product:

Remarks: No data available

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Routes of exposure: Oral
Target Organs: male reproductive organs

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Repeated dose toxicity

Product:

Species: Rat
: 300 mg/kg
Exposure time: 28 d

Species: Rat
Application Route: Oral
Exposure time: 90 d
Method: OECD Test Guideline 408

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Species: Rat
: 300 mg/kg
Exposure time: 28 d

Species: Rat
Application Route: Oral
Exposure time: 90 d
Method: OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Product:

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

- | | | |
|---|---|--|
| Toxicity to fish | : | LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l
Method: OECD Test Guideline 202 |
| Toxicity to algae | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Method: OECD Test Guideline 201 |

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NOEC (Pseudokirchneriella subcapitata (green algae)): < 100 mg/l
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10: 500 - 1,000 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10: < 1,000 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Product:

Biodegradability : Result: Biodegradable
Method: OECD Test Guideline 301D

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Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Biodegradability : Result: Biodegradable
Method: OECD Test Guideline 301D

Bioaccumulative potential

Ingredients:

Bis-(2,4-dichlorobenzoyl) peroxide:

Partition coefficient: n- : log Pow: 6 (20 °C)
octanol/water

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3106
Proper shipping name : ORGANIC PEROXIDE TYPE D, SOLID

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(DI-2,4-DICHLOROBENZOYL PEROXIDE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

IATA-DGR

UN/ID No. : UN 3106
Proper shipping name : Organic peroxide type D, solid
(Di-2,4-dichlorobenzoyl peroxide)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Organic Peroxides, Keep Away From Heat
Packing instruction (cargo aircraft) : 570
Packing instruction (passenger aircraft) : 570

IMDG-Code

UN number : UN 3106
Proper shipping name : ORGANIC PEROXIDE TYPE D, SOLID
(DI-2,4-DICHLOROBENZOYL PEROXIDE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-J, S-R
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 3106
Proper shipping name : Organic peroxide type D, solid
(Di-2,4-dichlorobenzoyl peroxide, paste with silicone oil,
≤52%)
Class : 5.2
Packing group : II
Labels : ORGANIC PEROXIDE
ERG Code : 145
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Reactivity Hazard
Acute Health Hazard
Chronic Health Hazard

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SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Polydimethylsiloxane	63148-62-9
Bis-(2,4-dichlorobenzoyl) peroxide	133-14-2

New Jersey Right To Know

Polydimethylsiloxane	63148-62-9
Bis-(2,4-dichlorobenzoyl) peroxide	133-14-2

The ingredients of this product are reported in the following inventories:

AICS (AU)	: On the inventory, or in compliance with the inventory
NZIoC (NZ)	: On the inventory, or in compliance with the inventory
ENCS (JP)	: On the inventory, or in compliance with the inventory
ISHL (JP)	: On the inventory, or in compliance with the inventory
KECI (KR)	: On the inventory, or in compliance with the inventory
PICCS (PH)	: On the inventory, or in compliance with the inventory
IECSC (CN)	: On the inventory, or in compliance with the inventory
TCSI (TW)	: On the inventory, or in compliance with the inventory
TSCA (US)	: On TSCA Inventory

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TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.